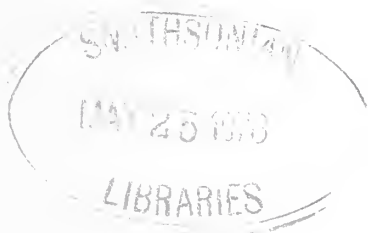
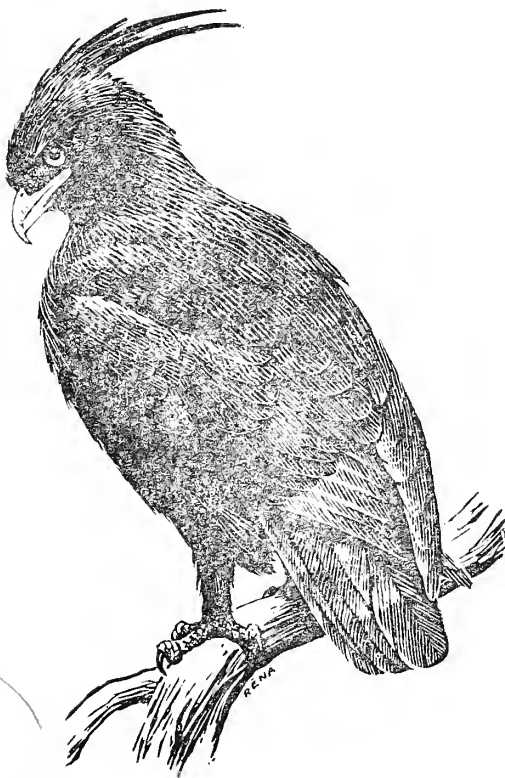


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E A N H S BULLETIN



NOTES FOR CONTRIBUTORS

Members of the Society (and non-members) are asked to follow these simple instructions when writing articles or letters for submission to the *Bulletin*. The *Bulletin* is presented six times a year in a duplicated format: the paper size is 20.5×23 cm (10×8 inches), line drawings can be reproduced but the area should not be more than 17.5×23 cm. Lettering on figures should preferably be in 'Letraset', neatly done in Indian ink or left blank: if the last method is followed, the lettering should be indicated on an overlaying sheet and should *not* be done on the figure. Figures should be prepared on good quality white writing paper and not on Bristol Board or other thick material. Whenever plants or animals are mentioned the scientific name should also be given but not in parenthesis. Trinomials should not be used unless there is good reason to do so. Author's names of species are not required.

Contributions may be typed (preferably) or written clearly and should be sent to: M. P. Clifton, Box 44486, Nairobi, Kenya. Receipt of contributions will be acknowledged.

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'LAWN SPIDERS'

Recently several members have come to the Museum to find out about the Spiders which make silk-lined holes in their lawns, so I thought I would write a little about them.

The Spiders concerned are in the family Lycosidae, or the Wolf Spiders. They are rather advanced and have good eyesight and usually hunt by day, creeping up on their prey by stealth. All the species that I know have dispensed with making a web, and, like all Spiders, each one trails a silk line behind it, touching it to objects in its path from time to time. The 'Lawn Spider' does not hunt in the sense that the other species in the family do, but waits for some insect or other small creature (I have heard of them catching small skinks) to blunder past so that it can jump on it suddenly.

The hole itself is usually about 1 to 1.5cm across and the silk round the top is laid down by the Spider to stop loose particles of soil raining down on it when a large animal comes near. The silk also gives the Spider a good grip on the side of the hole. The Spider itself is quite large, being about 6cm across the legs. The female is usually much larger than the male and very much stouter. Their colour is light grey-brown with the jaws bright orange, as are also the bases of the front legs in some specimens. The abdomen has a weak pattern of darker brown across it.

Most people when talking about Spiders want to know if they are poisonous. Though this species is very closely related to the 'Tarantula' of Southern Europe, it should be stressed that the poison is very weak, and only one Spider is known at present to cause any worry in this part of Africa - the Black Widow Spider which is very uncommon. To go back to the 'Tarantula' of Southern Europe, this is completely harmless and it is thought that the fits and fevers associated with it are caused by tick borne viruses which appear at the same time as the male Spiders go courting. The true 'Tarantula' is quite a small Spider and nothing at all to do with the big 'Bird-eating' Spiders of the tropical parts of the World.

When the 'lawn Spider' reaches maturity, after about 8 moults (as was the case in Geolycosa maderiana which I bred in England, a species with a leg span of about 10cm and the second largest in the family), the male begins to wander looking for a female, and often comes into houses. When the male finds a hole with a female in, which he can tell by the chemicals on the silk round the hole, he starts making a special tapping motion on the ground. This quietens the female so that he is able to approach, and

finally go into it to pair. After this the female usually chases the male away rather than eating him, a thing that does not happen as often as would be thought amongst Spiders. She then seals off the top of the hole, goes to the bottom and, making a thick sheet of silk, deposits the 100 or so eggs on it, covers them with silk and stands guard until they hatch. The young take about a year to reach maturity.

These Spiders are quite common in the lawns around Nairobi and are almost as plentiful in the rank grass of waste places around the city, but are not so easy to see. They form an important part of the diet for the Hadada Ibis, Bostrychia hagadash and the African Hoopoe, Upupa epops africana in one particular garden in Nairobi. It is interesting to see these birds probing down the holes for the Spiders which often make a bend in their tubes round a rock a few centimetres below the surface. How do the Spiders dig their holes? Simple, they chew the soil out with their strong jaws and carry it away.

M.P. Clifton,
P.O. Box 40658, NAIROBI.

NEW RECORD OF TIANG IN NORTHERN KENYA

At about 6 p.m. on 15th June 1977 I was flying with Dr Lamprey from Maikona to Mt Kulal in Marsabit District. As we flew over Gamura, a waterhole on the edge of the Chalbi Desert, we saw two animals which on close inspection proved to be Tiang, Dasmaliscus korrigum tiang. Although, of course, from the air we could not be certain that these were Tiang rather than Topi, Dasmaliscus korrigum topi, it would seem to be more likely. The nearest record of the Tiang is from Allia Bay on Lake Turkana, some 170 km to the North East, while the nearest for the Topi is from North East Mt. Elgon, approximately 340 km away. Topi to the North West of Lake Turkana can be safely excluded as possibilities as the Lake and the Omo River are effective barriers to their movement. (For details see Stewart and Stewart (1963), Journal of the East Africa Natural History Society 24 (3) and the E.A. Wildlife Society (1977) Report of the Working Group on the Distribution and Status of East African Mammals.)

It is interesting to speculate on how and why the Tiang came to be at Gamura. One possibility is that they are a relic of a much larger and hitherto unrecorded population which lived along the edge of the Chalbi when it was a lake with seasonally flooded pastures along its shores. The second possibility is that they have come from the Allia Bay population.

I tend to support the latter theory since we do not know of

any references among the local Gabra to their occurrence in the area. Also the recent, widespread and heavy rain may have enabled the Tiang to cross what would normally prove to be inhospitable to them.

Dr Christopher R. Field,
UNESCO Arid Lands Project,
P.O. Box 30592, NAIROBI.

SOME NOTES ON A PAIR OF CAPTIVE COMMON GENETS

The recent two part article by Mr Prickett in the November/December 1976 and January/February 1977 Bulletins on Genets has prompted me to recall my own experiences with a captive pair of Common Genets, Genetta genetta. These I kept as part of my duties as a keeper at Melbourne Zoo, Australia in 1974.

Firstly a word on their husbandry to set the scene. This was relatively simple, indeed standardized and the same as practised for other small and medium sized non-aquatic carnivores I kept at the same time such as Geoffroys Cat, Felis geoffroyii, Leopard Cats, F. tigrina, a Tiger Cat, Dasyurus maculatus, Quolls, D. viverrinus and a Mongoose of indeterminate taxonomic status. The Genets enclosure had dimensions of 1.5 x 4.5 x 2.2 metres, constructed of weld mesh and had a southerly aspect. It contained a coarse-grained sand floor, standard steel water bowl and a nest box of 80 x 30 x 30cm. The nest box was set 1.5 m above the floor and was reached by an arboreal freeway of stout branches. No nesting material was supplied intentionally and no attempt was made by the Genets to gather any of that inadvertently introduced; of a supposedly suitable nature.

They were fed and watered daily, with two starve days a week if they were in good health. Food consisted of dead rats, mice and day old chicks and regularly a special minced preparation with nutritional supplements added. My observations must, by the nature of my association with them, be limited by the short time I could spend daily in their company and the confining environment in which they lived.

My introduction to the Genets consisted of being told to check out everything in the off limits section of the Zoo I was newly made responsible for. Nothing loath to meet my new stock, I was somewhat mystified by an apparently empty enclosure with a promising nest box in the far end. On entering the enclosure my first impression was flavoured by the overpowering musky odour of the nest box. I looked into the entrance of the box and as my nose accustomed to the smell and my eyes to the dark I noticed

two pairs of eyes, one low and the other high, blinking in turn. This revelation was followed by a considerable volume of hissing and an increase in stink when I tapped the side of the box to encourage the inmates to reveal themselves. I did not have long to wait as two pointed faces suddenly came in my direction at considerable speed from little distance. As I leaned back a lithe form shot past my face and another over my shoulder, taking a mouthful of my hair with it. Having always imagined Genets to be little more than spotty Ferrets, I was not disappointed, and also not a little thankful I had snibbed the door on entering. As quickly as they appeared they ascended a branch leading to the nest box and were gone.

Returning in a little while armed with a pocketful of day old chicks I tried a more subtle approach. I placed a chick (these were dead of course !) in the mouth of the nest box, preparing to wait for a little action at such an invitation. There was an immediate shuffling inside as two bodies rearranged themselves, but the chick remained. I watched, and watched, and then grew impatient. Distracted by the alarm call of a Honeyeater nearby, I looked back and the chick was gone. Not so shy after all ! I put another in its place and there was no messing around this time for as I removed my hand it disappeared into the recess of the smelly nest box with a little hissing and spitting as a probable dispute as to prior claim took place. Content at having at least invoked a response of sorts I deposited my pocket load of chicks, and later some rats, on the floor.

After having made their acquaintance for a few weeks I put their apparent shyness down more to mishandling or at best a rough and tumble relationship with keepers, and the hypodermic syringe and thermometer of vets, than their supposed 'inherent' shyness and 'strictly' nocturnal habits. In fact I found that these inquisitive animals were often active, if undisturbed by man or other large creatures, in the early morning, dusk of evening and on overcast days, coming out and ferreting around and fossicking at any changes I might have made in the enclosure.

With the continuing non-success of winning their trust by bribing them with our one link, their daily ration, I tried to watch them at the most opportune time my routine allowed, after clocking off in the evening. With only thirty minutes of viewing time left I did not put out their food till I was ready to watch them, so I could catch a maximum of activity. I scattered small game all over the place, sometimes hanging it from the walls or hiding it under leaf litter (which had to be removed as it was considered insanitary and unnecessary by my supervisors). It was curious to see that they often collected the day old chicks

and mice, sometimes two at a time and almost invariably took them back to the nest box to consume. Sometimes they picked all of these up and deposited them in the nest box before eating anything - though this happened only occasionally. This habit often resulted in the most revolting messes of yolk (as day old chicks still have quite a proportion of yolk) glueing down mice tails and pathetic looking pink chicks legs to the nest box floor. Dead rats, as an article of Zoo Genets diet, were treated rather differently to smaller fry and were literally attacked and shaken before being consumed on the ground, only the odd incisor or tail-end remaining.

On two occasions I gave my Genets live food, by way of experiment, and expected them to be mystified since they were, I believe, either captive at or from birth, and not fully conversant with the correct form of hunter/prey relationships. For beginners they seemed to have killing instinct plus, especially the larger of the two. It attacked a live guinea pig in a flash and killed it by a quick bite across the back and a ripping with the back feet. It later excelled itself by catching a live Sparrow in the air by leaping from its nest box.

I am left in no doubt of the adaptability of the Common Genet: if this species took up a feral existence in Australia it would survive with great success, probably to the detriment of Rodent populations. Indeed, twice I found decapitated Spotted Doves, Streptopelia chinensis, pulled up close to the Genet enclosure, so I can only presume these dim-witted birds put their heads into the enclosure only to lose them to a hungry Genets flash attack: a sort of one way ticket to Columbiform Valhalla !

Any distinct changes in the interior of the enclosure such as new stumps and branches resulted in the larger Genet closely followed by the smaller tentatively high stepping along the wall until each new or changed object was investigated. I did not observe any obvious attempt to scent mark the new object, but probably the whole enclosure was so saturated with the overpowering odour of Genets so as to make it unnecessary.

Both Genets appeared to be extremely watchful of birds, and large ones such as Ravens, Corvus mellori and C. coronoides flying over sometimes caused them to rush into their box, if they were still up and about when the Ravens were waking up. They always appeared quite well groomed and occasionally could be seen to lick themselves, particularly their feet. I never saw them lick or even intentionally touch each other and they did not appear to give themselves the sort of ritual toilet the domestic cat does, as I thought they might.

Scats were always left in the same spot along a bit of open wall and although they were removed every day and I might have changed the decor somewhat, I suspect the musky old Genet smell was strong enough to compel the lasting use of this spot. This might have been inconvenient as I once left a stump on the latrine spot and the next morning the scats were deposited on the top of it. They could have made their latrine spot a lot further away from their nest box if they had wished to.

I was unable to find out the sex of my Genets and no one seemed any the wiser than me, till due to my good natured folly one of them had to be caught. I had neglected to remove them from their nest box in the morning for a few days running for the regulation daily inspection to make sure of their health. Since it always seemed to leave them in a dither I had left them alone. A tell tale streak of blood and pus revealed that something was amiss and it proved to be the larger Genet had an abscess in the middle of his tail, as he proved to be a 'him', and he lost half of it. I nearly lost my job for such incompetence, probably rightly so, though at the time I felt differently.

That I kept any records of the Genets apart from my regulation daily Zoo diary of births, deaths, arrivals and departures, and the occurrence of escapees and diarrhoea, was due to their active and engaging nature when compared to other carnivores in the extremes of close captive existence. These personal records are scanty enough and were made as jottings in a note book which was soon lost so the fallible memory had to be relied upon.

One wonders what other keepers world wide, must see and learn, only to be forgotten as memories fade and no written records remain.

Simon Townsend,
13 Parkstone Ave, Pascoe
Vale South, Victoria 3044,
AUSTRALIA.

CARACAL IN KAREN

I live on the Eastern side of Ndege Road, Karen near Nairobi, where I have a two hectare plot. At about 11 a.m. on 16th October I was pottering around in my garden when my large Doberman Pinscher began barking excitedly around a thicket of bush which grows at the back of the herbaceous border at the far side of my lawn, a mere 10m from Ndege Road. I went across and found he was being answered from within the thicket by a ferocious spitting and hissing. The second Doberman then arrived and out of the thicket came a Caracal, Felis caracal. He passed

within four metres of me and then lolloped across the lawn, past the house to the other end of the garden. The dogs had not seen him come out on my side of the thicket so fortunately did not give chase.

V

He was a large mature Caracal. From his size I would imagine that he was a male and he appeared to be in magnificent condition. I had known for some months that some type of wild cat was living in my garden and indeed the dogs have barked around this same bush before without driving him out. But I had never before seen the animal and certainly never suspected that it was a Caracal.

Our house is at an altitude of exactly 1829m, and I would not have thought that a Caracal would choose to live in a residential area at this altitude. Admittedly he has the Karen Golf Course and a vlei behind us to range in search for food but apart from the Crowned Plover, Vanellus coronatus there are few ground birds in the area. I would assume he is living mainly on rats and mice.

Oh for the old days when a good sized domestic cock cost -/50 cents ! I would happily have bought him one daily to keep such a delightful animal living on my plot but alas feeding him today would be too expensive an undertaking - anyhow he seems to be able to do it himself.

Eric Risley,
P.O. Box 24751, NAIROBI

THE PUGU HILLS FOREST RESERVE, DAR ES SALAAM

An excellent spot for bird watching and natural history study of all kinds is the Pugu Hills Forest Reserve near Dar es Salaam, Tanzania. This relatively well preserved area of forest has some highland as well as coastal affinities. It is one of the few readily accessible forests in Tanzania. Although the forest is suprisingly little known in view of its proximity to Dar es Salaam, the Bats have been extensively studied by Dr Kim Howell of the University of Dar es Salaam. D.A. Turner, M. Robbins and I visited the forest on 17th July with Dr Howell.

The Forest Reserve can be reached by proceeding 14km beyond the Dar es Salaam International Airport on the road to Kisarawe. At this point, a turnoff to the left leads to the Minaki Secondary School. Just opposite the bus stop at the school a track leads down to the left to the school's pumping station and a small lake. This track is excellent for forest birds, including Narina's Trogon, Apaloderma narina, Green Tinkerbird, Pogoniulus

simplex, Kretschmer's Longbill, Macrosphenus kertschmeri, and Crested Flycatcher, Trochocercus cyanomelas. On this track we also saw two uncommon forest birds, the Eastern Least Honeyguide, Indicator meliphilus and the Uguru Violet-backed Sunbird, Anthreptes neglectus. A very rare Tanzanian endemic, Mrs Moreau's Warbler, Bathmocercus winifridae, has been recorded from the forest.

Another, more extensive forest area can be reached by turning right at the 14km crossroads on a track which leads down to the kaolin mines. This track crosses the railway lines near the Pugu Station. The Bat Hawk, Macheirhamphus alcinus, has been recorded from here. With the extensive studies of forest birds being done on the Kenyan coast, more thorough study of the Pugu Hills Forest might shed light on such questions as the migrations and wintering quarters of coastal forest birds.

J.D. Gerhart,
P.O. Box 41081, NAIROBI.

FOOD STORAGE IN INDIAN HOUSE CROWS

On Mombasa Island between 15th and 17th October 1977 I kept under observation for several hours daily, six Coconut Palms, Cocos nucifera because of the great nesting activity of the Indian House Crows, Corvus splendens. Four of the trees had completed nests containing well grown chicks, 4, 4, 4, and 3 in number, and in the remaining two trees nests were near completion. During the late afternoon the chicks were very active, testing out wings, pushing each other around near the edges of the nests and much begging for food when the adult birds were nearby. The inside gape of the chicks was a bright coral-orange colour.

On several occasions the attendant adult birds on the occupied nests were seen to abstract food from the base of a cluster of nuts near the nest site, hold the food down with one foot, tear pieces off which they appeared to eat and feed the chicks by regurgitation. The cluster of nuts was then revisited and the remaining food firmly stored again. The food appeared to be mainly crabs and fish skin. No restocking of these 'larders' was observed. No mention of this obvious larder system could be found in any of the standard works on East African birds.

Mrs E. Angwin,
P.O. Box 72833, NAIROBI.

IDENTIFICATION OF THE HOOPOE, UPUPA EPOPS

There are times in East Africa when three races of the Hoopoe are present, thus the identification of the birds might be difficult. Two are migrants, one from the Palaearctic. The African Hoopoe, Upupa epops africana is with us throughout the year and breeds regularly. These are resident birds or intra-African which move about, appearing now and then, residing a while and then moving on.

On the other hand there is another intra-African migrant known sometimes as the 'Somali' or 'Senegal' Hoopoe. This race was known as U.e. somaliensis or U. e. senegalensis and herein lies the confusion. In Sclater's 'Systema Avium Aethiopicarum' 1924 the bird is known as the Somali Hoopoe, U.e. somaliensis; however in Mackworth Praed and Grant 1952 the bird becomes the Senegal Hoopoe, U.e. senegalensis, but a third African race is recognised by some as U.e. waibeli ie. in White (1965) Revised Check List of African non-passerine birds with the type locality Cameroons and it is said to range into Kenya and Uganda. However, it appears to be doubtfully distinct in the hand (Museum skins) and thus virtually impossible to identify in the field.

So, for simplicity we can recognise the African, Somali and European Hoopoes. The European would only be with us from around September to April while the Somali would overlap, arriving around April and leaving in August/September. This race may even breed in East Africa.

The diagrammatic wing patterns of the bird in flight may assist identification. All black primaries and secondaries will be the African Hoopoe, all primaries and secondaries with a white spot thus forming a continuous white semi-circle will be the European while the Somali race shows the greatest area of white particularly from the shoulder and across the coverts and secondaries. There are intermediates as far as the degree of white or pale pattern is concerned, nevertheless these three wing patterns should help the observer identify his bird.

G.R. Cunningham van Someren,
P.O. Box 40658, NAIROBI

PREYING BY FISCAL SHRIKE ON STREAKY SEED-EATER

In July we witnessed an attack by an apparently immature Fiscal Shrike, Lanius collaris on a Streaky Seed-eater, Serinus striolatus in our garden in Lavington, Nairobi. The Fiscal

diagrammatic wing patterns

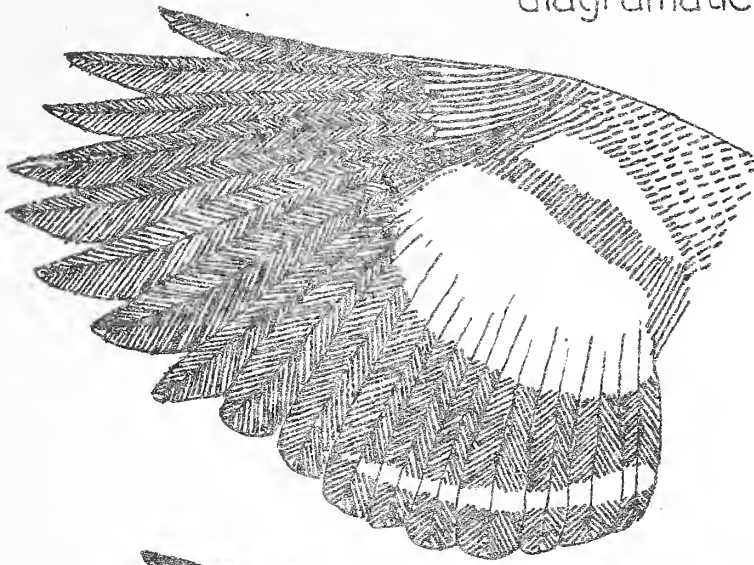


fig 1.

african hoopoe

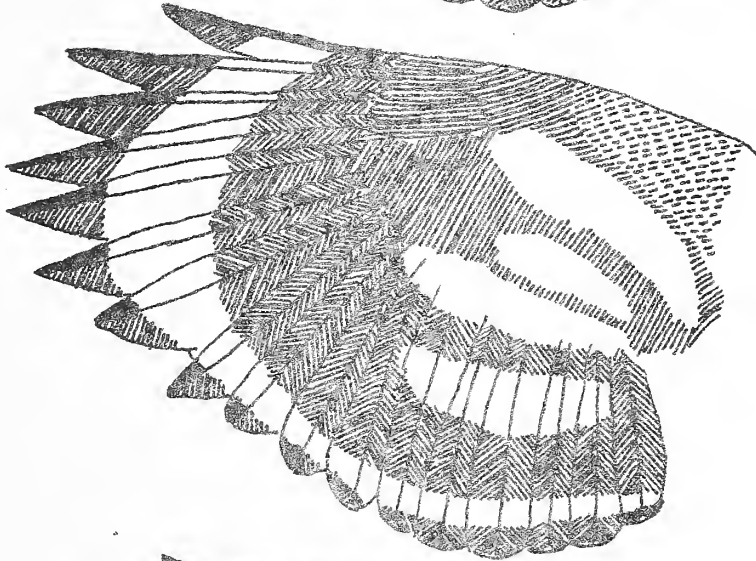


fig 2.

european hoopoe

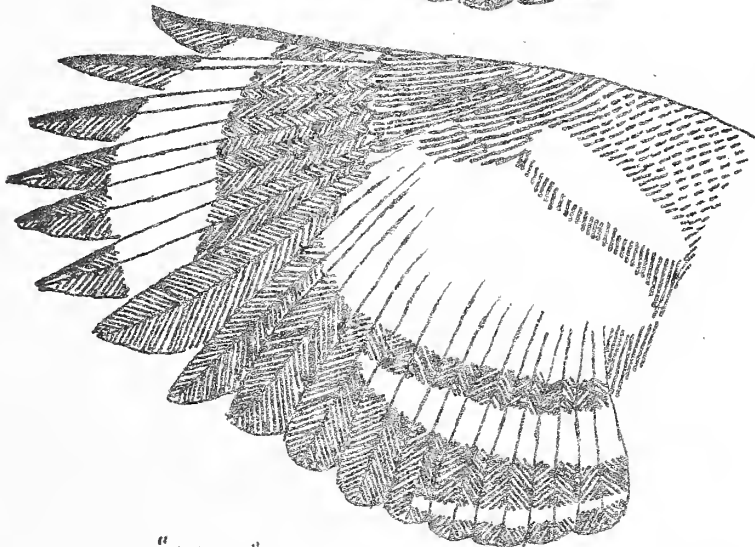


fig 3.

somali hoopoe

appeared to pin the Streaky Seed-eater to the ground and killed it rather quickly. When we approached the scene this frightened off the Shrike momentarily but he returned a few minutes later to carry off his prey. Frightened again by a passerby he dropped the dead bird some 20m from where it was killed. The Shrike returned again some five minutes later and picked up the dead bird and flew with it out of our garden and our view.

Frank and Ruth Durfey,
P.O. Box 30137, NAIROBI.

INTERESTING BIRD RECOVERY

I would like to draw to member's attention the following bird recovery. I think it is interesting as the bird, a Red-rumped Swallow, Hirundo daurica, had worn the ring for just under eight years, and it was adult when I ringed it. It was caught at Kariobangi Sewage Works, Nairobi on 12th September 1969 and ringed. On 7th July 1977 the same bird was captured alive at the Firestone Factory, Nairobi and released.

Mrs Lise Campbell,
P.O. Box 14469, NAIROBI

THE TALE OF A SKIN

On the morning of 28th September 1977 I was called out to the back of our house at Watamu, Kenya with 'Come and see this huge snake !' There it was curled up in the branches of a spreading Bamba-kofe Tree, Afzelia cuanzensis about 10m from our back door, which, of course, is always used by anyone coming into the house. It was about 3m off the ground and right above the path. At first it was difficult to identify as we could not see the head, just the under part coiled round, but it looked quite large, and appeared very pale, almost white. A little later we saw the head, comfortably relaxed and resting on a coil. 'She' (I'm sure she looked female) peered over at us standing just below, seemed to like what she saw, and put her head away again. She was definitely a Mamba, and seemed to be pale grey-beige on the back. Out came all the reference books we had on snakes, and she could only be a Black Mamba, Dendroaspis polylepis polylepis. On reading V.F.M. FitzSimons, A Field Guide to the Snakes of Southern Africa we found " Its great size, alertness, extreme agility, reputed uncertain temper and aggressiveness, together with the deadliness of its venom, make it the most feared snake on the continent. When confronted it often shows great truculence especially during the mating season ". She seemed so out of place; again quoted as "being

found more in open bush country where it lives in abandoned animal holes, termitaria or in rocky outcrops. In such a chosen hide-out it will live for years if undisturbed, and return regularly after forays for food or to find a mate ". It also said this snake was equally at home on the ground or in trees, but I have never seen one in a tree before.

All that morning people went backwards and forwards underneath the snake, the dogs rushed out barking, the cats wandered in chatting as usual at meal times, and we showed her off to friends. No aggressiveness at all, in fact complete indifference, though she would sometimes peer over at what was going on.

On our plot, having a lot of thick undergrowth and trees, we have a number of Green Mambas, Dendroaspis angusticeps, and they were not at all aggressive. They sleep up in the trees in the day time, going off at about 3.30 p.m. and returning at around 8.00 a.m. to sleep during the heat of the day. Very often during very dry weather we have given them a shower when watering the garden, which they love; they put their heads up and round like a cat being scratched behind the ears.

We fully expected this very pale version of the Black Mamba- no way could we believe it was a green one gone wrong- to go off again in the evening. But she was still there at 10.30 p.m. when we flashed a torch on her- again she just peered over at us. Next morning she was still there, though she had moved to another branch a little further up and over the path. This went on for four days and nights, and was very puzzling indeed. We even contemplated calling in Mark Easterbrooke, our local snake expert and collector but it did not seem a very nice thing to do to our trusting Mamba. Then on 2nd October she was still there at 7.30 a.m. when we went fishing; but on our return at 10.30 she had, we thought, moved off at last. However, about an hour later we went out again, and there hanging over the path was a long tail. We crept up to have a look, and then realised that the tail was empty. There, seemingly as a reward for taking care of her when she was defenceless, she had left us her complete skin, draped right across the entrance to our home !

We very carefully took it out of the tree, it was still soft and vaguely damp, quite perfect, not a tear or a blemish anywhere, but as if taking off a stocking, it was completely inside out, right to the very tip of the tail. Every scale was marked, the scales over the face and jaw and also the eyes. The underpart of the body was single horizontal scales going right round the belly, but at the end of the body where the tail joins on, the scales divided into two. (Here no doubt experts could tell us the snake's sex from the size of the vent).

We measured the skin and it was exactly 244cm (8') long, the length of the tail being 59cm. She must have started the peeling off from her face and head, and it looked as if she was pushed through a 'V' branch and peeled it off backwards. This, of course, was the reason why she was so pale. What a pity we were not watching her that morning, and what a beauty she must have looked in her new skin! She was off and gone, and we traced her up the path past our cook's house, over the plot next door, and into the thick bush beyond.

It is probably natural for such a snake to take to the trees when shedding its skin, but who can say why she came to the one place in that area where there is almost constant human activity. A few metres away on either side and we would have never known she was there. One wonders if she felt safer with us, and she knew we like snakes; though I must admit I was a little dubious as to whether I really did like a Black Mamba over the entrance, or if I was just kidding myself? Will she return when the time comes for her next skin to come off; are they normally immobile for as long as four days and nights? Can anyone tell me how often a Mamba sheds its skin? And now what can we do with this beautiful, still soft and silky skin?

Anne V. Donnelly,
P.O. Box 420, MALINDI,
Kenya

In answer to Mrs Donnelly's queries, here are a few general answers. Snakes usually are immobilized shortly before shedding their skins, but they normally hide away in a safe place as, during the early stages of the process, the eye clouds over rendering the animal practically blind. It is surprising that this specimen was out in a vulnerable position four days before the skin was shed - presumably its eyes had already clouded and it took its time over the actual shedding.

Black Mambas are common along the coast particularly in the thick scrub on coral rag, where the Green Mamba is rather uncommon. The Black Mambas are more territorial than Green Mambas and are more likely to enter houses and lie up in store rooms and packing cases etc. which makes them rather more dangerous.

How often do Mambas shed their skin? It is very variable and depends on the snakes activity, but it would be safe to say about every six weeks to two months.

Alex MacKay,
Herpetologist,
P.O. Box 40658, NAIROBI.

WASPS IN ALOES

Over a period of time, a watch has been kept on some cultivated Aloes in Nairobi in which small holes were drilled in the flowering stems by insects. These holes were about 2mm across and the fibres from inside the stem were littered over the leaves, suggesting the larvae of a Cerambycid beetle.

Investigation of a stem of Aloe secundiflora showed that these holes were in fact made by a Sphegid Wasp, Crabro bipunctatus which was using the stem as a nesting site. The hole went up the stem and small cells were made by partitions in the hole. These cells contained larvae and pupae and were stocked with a large number of tiny flies. A series of about six young appeared to be the limit, though it is possible that they have several broods. In the A. secundiflora stem there were three separate nests, and one was also found in the stem of A. graminicola, but as the stem was still full of sap the wasp had not dug out a proper nest chamber, only a hole big enough to house itself.

The only specimens in the National Museum, Nairobi collection before the above were brought in were from Bulawayo, Rhodesia.

M.P. Clifton,
P.O. Box 40658, NAIROBI

RECORD SECTION

The following plants are all new distribution records from the Rift Valley for A.D.Q. Agnew's Upland Kenya Wild Flowers. They were all collected in August 1977 by M.P. Clifton whose collection number follows the data :

Eumaria abyssinica Hamm. Fumeriaceae. Near Naivasha town,
No 1214

Capsella bursa-pastoris (L.) Medic. Cruciferae. Naivasha -
Nakuru Road, near Ilkek. No 1381

Portulacca foliosa Ker-Gawl. Portulacaceae. Naivasha Town.
No 1351

Rumex bequaertii De Wild. Polygonaceae. Naivasha - Nakuru Road
near Ilkek. No 1399

Cyathula schimperana Moq. Amaranthaceae. Masai Gorge, Lake
Naivasha, North Lake Road. No 1326

Abutilon longicuspe A. Rich. Malvaceae, Masai Gorge, Lake
Naivasha, North Lake Road. No 1306

Torilis arvensis (Huds.) Link. Umbelliferae. Masai Gorge, Lake Naivasha, North Lake Road. No 1301

Galium spurium Linn. Rubiaceae. Hell's Gate. No 1268

Gnaphthodium purpureum Linn. Compositae. Hell's Gate, No 1256

Hypochoeris glabra Linn. Compositae. Naivasha - Nakuru Road, near Ilkek. No 1380

Wahlenbergia sp. A of U.K.W.F. Campanulaceae. Hell's Gate. No 1279

Barlaria micantha C.B. Cl. Acanthaceae. Near Naivasha Town. No 1234

LETTERS TO THE EDITOR

Dear Sir,

Cowries on the South Kenya Coast

I welcome the note by Mr and Mrs Dengate on page 112 of the September/October Bulletin on living Cowries found on the reef at Tiwi Beach, Kenya. In a paper to be published in the Journal of the Society I record various species found at Tiwi, in addition to others noted as having a widespread distribution: I have not seen Cypraea talpa and C. cribraria which were found by the Dengates - these I would class as uncommon nowadays on the Kenya coast. In addition to those noted by the Dengates I have seen several other Cowries at Tiwi :

Cypraea arabica
C. fimbriata
C. staphylaea

Cypraea chinensis
C. nucleus
C. teres

Cypraea felina

Cypraea chinensis was only seen on one occasion on the lagoon side of the reef just North of a gap opposite Tiwi Creek. C. nucleus was also seen only once but this was found on the seaward side of the reef, where also is sometimes found C. staphylaea (as in C. limacina). Although C. felina, C. fimbriata and C. teres have not been seen recently, some time ago they could be found on the lagoon side of the reef in the area North from Tiwi Creek almost to the beach of Twiga Lodge. C. arabica was seen in the pools in the reef North of Twiga Lodge.

The information that a local fisherman had specimens of Cypraea boivinii (supposedly from Shimoni) indicates the importance of establishing authentic records for this species from East African coasts - I also have a specimen obtained from a beach shell trader.

I look forward to further reports from shell enthusiasts.

John F. Osborne, P.O. Box 30148, NAIROBI

Dear Sir,

NEST RECORD CARDS

No wonder Dr Brown has accomplished much in his lifetime if he can fill out a bird nest record card in detail in two minutes, when it takes the rest of us longer than that just to spell the name right !

But joking aside, I would like to support him in asking all of you to fill out nest record cards. Here are a few do's and don'ts to simplify matters.

DO fill out a card for every bird you find nesting or feeding young, no matter how 'common'. It is only through regular and complete records that we will get a true picture of birds habits. DON'T think you have to fill every space on the card. You will not have to shinny up the tree and peer into the nest to count the eggs ! A bird sitting on a nest or feeding young (in or out of the nest) is a good enough record.

DON'T think you have to observe the nest from laying to fledging. A single record of a bird sitting on eggs or feeding young is of value.

DO fill out the card in detail if you can. If you are able to observe the nest over a long period, it will be a better record. Even in a single observation write down as much detail as possible, especially the plumage of juvenile birds.

DO fill out a card when you see an adult bird feeding a fledgling (a young bird which is able to fly and is out of the nest). Note the fledglings plumage.

DO send your cards promptly and regularly to :

Mrs Hazel Britton, P.O. Box 90163, MOMBASA.

Fleur Ng'weno,
P.O. Box 42271, NAIROBI.

BOOK REVIEW

Wickens, G.E., The Flora of Jebel Marra (Sudan Republic) and its Geographical Affinities. Royal Botanic Gardens, Kew.
Kew Bulletin Additional Series V, London OHMS 1976.
Price £ 25 nett.

Jebel Marra, the subject of this study, is a volcanic massif rising to over 3000m, located in the Sudan Republic near the border with Chad. The location on the study area virtually in the centre of the African continent makes it an area of prime phytogeographical interest. An analysis of the origins of the flora of the Jebel Marra massif is of considerable importance to the phytogeography of Africa, particularly in terms of the

interplay of temperate and tropical elements of the African flora.

This work gives a thorough account of the flora of Jebel Marra, including a detailed species list, as well as a generalized account of the flora of the Sudan. Climate, geology, soils and the history of human use of the massif are also considered in some detail. The chapter on the history of botanical exploration of Jebel Marra echoes the history of many other montane areas in Africa. Only recently have these areas come under detailed study.

The phytogeographical aspects of the study are also thoroughly covered, beginning with an introduction to phytogeography. A careful and well-organized review of the phytogeographical divisions of Africa and its neighbouring regions is of great value as a recent attempt to define the exact nature of the various divisions. The outline given by Wiskens will be very useful as a framework within which to consider other African floras. The review of the literature is quite useful, as it is well footnoted, and the minor adjustments made by the author to existing phytogeographical theory are well-documented by a complete catalogue of distribution maps for each species seen at Jebel Marra.

Wickens' review of the geomorphic history of Africa, with emphasis on the Quaternary period is enlightening, with regard to geologic influences on the evolution of the African flora.

For purposes of analysis, the Jebel Marra flora is divided into a savanna element and montane and temperate elements. Phytogeographical analysis of the Jebel Marra flora indicates strong affinities with the floras of northeastern Africa and East Africa. The Jebel Marra flora is considered to be a derived flora, and not developed in situ, having arrived at Jebel Marra by various migration routes, largely from the East. Though the survey of the montane and temperate elements of Jebel Marra is quite complete, the author notes that there are gaps in the phytogeography of Afro-montane and temperate elements due to inadequate surveys of other African montane areas.

The Jebel Marra study is a useful reference for phytogeographical studies of tropical montane areas. Perhaps one of the most important conclusions of this study is the fact that much more work needs to be done in Afro-montane floras. Wickens has provided an admirable model for other studies to follow, as well as an excellent reference for comparisons of phytogeographical analysis of floras of other Afro-montane areas.

Mrs V.C. Fayad,
P.O. Box 14790, NAIROBI.

SOCIETY LECTURE NOTES

Mr James Kahurananga on 'The Ecology of Large Herbivores in the Simanjiro Plains, Northern Tanzania'

On 12th September 1977 Mr James Kahurananga gave Society members a most interesting lecture on his research programme that was designed to complement Dr Hugh Lamprey's classic studies in what is now the Tarangire National Park. Dr Lamprey's work had shown the Tarangire to be a dry season concentration area for plains game from the huge tract of Masailand known as the Simanjiro Plains. Our speaker's task was to establish that the Tarangire N.P. and the Simanjiro Plains were in fact one ecosystem, then to study the exploitation of the plains by both wild and domestic herbivores, and finally suggest management plans for safeguarding the viability of the ecosystem.

Mr Kahurananga's research was spread over three years. He first recorded and accurately mapped the distribution of the four main plant communities of the plains - these were well-drained open grassland, bushed grassland, seasonally flooded or water-logged grasslands and Acacia woodland. This work was done by a combination of aerial and ground surveys, the latter including many uncomfortable 'quadrat-hours' to precisely determine the flora of each community.

Once the vegetation had been mapped, regular census flights along 100 transect lines provided data both on the numbers of herbivores and on the plant communities which each species particularly exploited. The latter aspect was followed up in more detail by careful observation on feeding habits from that useful moving hide, a Landrover.

Livestock was found to represent the highest proportion of the total herbivore biomass and were more numerous during the dry season when they were concentrated around the very limited number of watering points. The census work very clearly revealed the westward movement of wild herbivores towards and into the National Park as the Simanjiro Plains dried out. As elsewhere, Zebra, Wildebeest and Thomson's Gazelle were found to have different feeding niches, Zebra taking coarser and taller grass than Wildebeest which also largely rejected stems in favour of leaves. When these two species had largely cleared an area of grass cover the Gazelles moved in to feed on the new shoots growing up from the underground parts. Cattle and Wildebeest appeared to be in competition for the same food when both were present in the same area and the invasion of the pastures by certain woody plants was a sure indication of overgrazing.

Mr Kahurananga touched briefly on the problems posed by poachers and charcoal burners. He did not consider either of these to be too serious. Access to the woodlands is so difficult for vehicles that the profits from charcoal are largely offset by breakdowns of trucks and lorries while the penalties for poaching are now sufficiently severe to act as real deterrents - eight years in jail was quoted as the sort of sentence being given nowadays. It was very good to hear that as a result of Mr Kahurananga's studies the Tanzanian Government management/development plans for this part of northern Tanzania include provision of a broad, settler-and cultivation-free corridor between the Simanjiro Plains and Tarangire National Park that will permit free movement of plains game between their wet and dry season habitats while provision is also being made to reduce the numbers of livestock by setting up a meat canning factory for the region.

Thank you Mr Kahurananga for providing us with such an interesting and instructive meeting.

J.F.R.

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Mrs Judith Rudnai on 'The Ecology of Lions in Nairobi National Park and the Kitengela Conservation Unit'.

On 10th October 1977 Mrs Rudnai gave a lecture on research that she has been doing on the factors controlling the Lion population of Nairobi National Park (NNP) and the adjoining 450 km² of the Kitengela Conservation Unit (KCU). In a short summary it is not possible to do full justice to all the interesting data which members heard, but the most important conclusions were :

Nairobi NP has had a stable Lion population of about 30 animals for the last 30 years in spite of considerable fluctuations in the biomass of available prey. The KCU, although offering similar habitats to those favoured in NNP, suffers too much disturbance from Cattle herders to have resident Lions, though Park Lions hunt there, especially when prey is scarce in NNP. Lion numbers, or rather Lions per unit area, are prevented from rising above a certain density by the animal's social behaviour, notably violent aggressive behaviour towards strange Lionesses attempting to encroach on a territory, the closed nature of the female pride to which only adult males are admitted and the emigration of young males and some young females when about two years old. In due course nomadic males acquire female prides as the old males become senile and die.

Mrs Rudnai then discussed Lion predation on livestock and the implications of this and her previous findings on management policy designed to maintain a stable Lion population in NNP. Livestock killings showed no relationship with either rainfall or the availability of wild prey; in fact some of the peak periods of attacks on livestock coincided with high populations of wild ungulates. Altogether between 1970 and 1975, 92 livestock were killed by Lions in the KCU and on ranches to the East of the Park and KCU. Though these losses are less than 2% of the stock number involved they result in intense anti-Lion (and anti-predator in general) feelings among the livestock owners particularly where husbandry is being switched to the production of high quality Cattle rather than simply large numbers. During this same period the stable NNP population produced an increment of 36 emigrant Lions. Nineteen Lions were shot on ranches and two were speared in the KCU while ten other probably natural deaths were known, leaving only five of the increment unaccounted for. It is clear that if resentment against Lions increases to the extent that stockkeepers shoot nomadic Lions on sight, the Lion population of NNP is doomed. There is good evidence that in the KCU and probably on the ranches, revenue from game-viewing could yield two or three times the income from cattle even under the best husbandry. Whether livestock owners can be persuaded to adopt this form of land use is another matter but their resentment against Lions could be minimised by a streamlined and fair method of obtaining quick compensation for stock killed by Lions originating from NNP.

Almost incidental to her main theme were a number of other fascinating facts about Lions. For example, good hunting appears to stimulate the onset of the females' oestrous cycles so that births show a peak about three months after maxima in the numbers of available prey. Lions start breeding younger in NNP than in the Serengeti, Tanzania, have a larger litter size and produce a yearly increment of 20% as compared with 11% even though the ratio of prey biomass to predator biomass is $2\frac{1}{2}$ to 3 times higher in the Serengeti than in NNP. The explanation of this apparent paradox is that the main prey of Lions in NNP is Kongoni which are resident, while the Serengeti Lions have long periods of prey scarcity when the ungulates are away from the lions' territories.

Our thanks go to Mrs Rudnai not only for giving us a most stimulating lecture but also for being willing to talk to us at very short notice in place of our scheduled lecturer who had to be out of Kenya on our meeting day.

J.F.R.

SCOPUS

The third issue of Scopus has been published. Your executive committee has asked me to write this note to encourage more subscribers. At present there are about 170 scattered throughout Africa, Europe and North America.

Scopus is published every three months, with an extra fifth issue each year taking the form of an annual report. The five issues will comprise about 150 pages this year. Material published in Scopus relates to East African ornithology in the widest sense: the style is scientific yet readable. Some idea of the contents of the first three issues can be gathered from the following :

A ten page paper on bird species restricted to East Africa by D.A. Turner appeared in the first number, an account of the 1976/77 autumn migration at Ngulia in Tsavo by G.C. Backhurst and D.J. Pearson, $3\frac{1}{2}$ pages on the identification of Honeyguides by A.D. Forbes-Watson completes the papers in the first issue. In the next, P.L. Britton contributes a $5\frac{1}{2}$ page article on the status and identification of East African Terns. The status of the recently rediscovered Friedmann's Bush Lark, Mirafrapa pulpa is discussed by P.C. Lack and there is also a two-part compilation of recent Palaearctic records - clearing the decks before the first annual report issue. The stress in the third number is on biological topics including a detailed review of the thermoregulatory problems encountered by birds living in hot areas by J.F. Reynolds and a short paper by P.L. and H.A. Britton on the interesting habit of some Sunbirds at the coast of nesting in houses. R.J. Dowsett reviews the status and distribution of some East African Falcons and Plovers as groundwork for the forthcoming companion volume to Hall and Moreau, An Atlas of Speciation in African non-passerine birds. Lastly P.L. Britton looks at the weights of some species which occur at the coast and in western Kenya and comments on the differences found.

There is also a number of Short Communications covering a wide range of subjects. The second and third issues both contain additions to the Kenya list : Turtle Dove Streptopelia turtur by J.F.M. Horne and L.L. Short and the Grasshopper Warbler, Locustella naevia by V.C. and C.C. Fayad.

Full details of how to subscribe to Scopus are given in each issue. Local members of the Society may receive it by sending Shs. 50/- to D.A. Turner, Scopus a/c, P.O. Box 48019, Nairobi. The subscription is annual, so those paying now will receive all the issues published in 1977 plus the bird report which will be out next year. People having material to contribute- and

all are welcome- should send it to Dr D.J. Pearson, Department of Biochemistry, P.O. Box 30197, Nairobi.

G.C. Backhurst,
P.O. Box 29003, NAIROBI

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March 1977 saw the birth of the Society's new quarterly ornithological journal Scopus, and in the first eight months of circulation the membership is already close to two hundred, equally divided between local and overseas members, including many overseas museums, ornithological societies and institutions.

We in the Ornithological Sub-Committee would like to take this opportunity to express our deep appreciation to the Society Chairman, Mr John Karmali, the Executive Committee and all members for their enthusiastic and encouraging support. It is our hope and intention that Scopus will soon be recognised as one of the leading ornithological publications in Africa, and one that our Society members can be proud to be associated with.

Ornithological Sub-Committee

SOCIETY NOTES

1978 Subscriptions It is with great pleasure that I can tell you that at the last Executive Committee held on 19th October 1977, it was decided not to raise the local membership fee of Shs. 50/-. However, it was decided that the Overseas subscription rate would have to be raised to Shs. 70/- as from 1st January 1978. A membership renewal notice is enclosed with this issue. I would be most grateful if you will fill it in and return it to me, even if you pay by Bankers Order. Last year many of these did not come through, and it was a great help to have the slips giving full details of the Bank and branch from which payment should have been made. Why not pay your 1978 dues now before the Christmas money rush starts !

Informal Notes and Posters have arrived. These are very attractive, and a set of twelve informal notes with envelopes sell at Shs. 10/- per set. They are on sale at most lectures and in the Society's office at the National Museum, Nairobi. An added attraction is that they are under 10 grams in weight, ideal for overseas letters. The Posters are also very attractive, and are given free to members who have an office or club to hang them in. Please call at the office to collect them.

Maps Should any member leaving the country have any unwanted maps of 1 : 50,000 scale or smaller, the Society would be grateful to have them for use as reference and for future functions. Any such maps may be handed in at the Society's office.

Medicinal Plants of East Africa by our Vice-Chairman, Dr John Kokwaro is still available at discount price to members :

Soft Cover Shs. 55/- Local postage Shs. 4/50

Hard Cover Shs. 85/- Local postage Shs. 6/30

This book would make a very useful present to a Doctor friend for Christmas !

Lake Nakuru, the Lake of a Million Flamingos. This well illustrated book is still available to members at a special rate of Shs. 50/-. If you order by post, please include Shs 4/50 for packing and postage. As with the above book, copies are available in the office, and would make a good Christmas present.

Functions It has come to my notice that some members are signing up for camping trips, and not arriving. If possible please inform the Secretary either in the Society's office or on telephone 20141 ex. 18 if you are unable to attend the function. Members are also reminded that the indemnity clause must be signed by participants on field excursions. While on the subject of functions, any member who is willing to lead and organise a function, either a day trip, week-end camp or a lecture should please contact Mrs A.L. Campbell, P.O. Box 14469, Nairobi.

Car Stickers are still available from the office and at most lectures. Only Shs. 2/- each !

Requests for information on natural history subjects have been asked by several members recently in the office. We would like to encourage this, so if you have any questions on birds, bugs, beasts or botany please write to the Editor of the Bulletin who will try and have your queries answered by a Museum expert on that subject. We look forward to hearing from you. Also the Bulletin editor would like to have more records of plants or animals to include in the Record Section of each Bulletin.

Nature in East Africa. The Society's first Bulletin, published between 1947 and 1950 makes very interesting reading. Two complete sets, comprising 11 issues and a Special Supplement on the Animals of Nairobi National Park are available. Cost to members, Shs 100/- per set. Separate numbers are also available except for Series 2 No. 1 at Shs. 10/- each. Postal orders accepted, but please add Shs 2.70 for postage.

We would like to wish all members a very happy Christmas
and a prosperous 1978. We hope you will continue to
enjoy the Society's facilities during the coming year.

NEW MEMBERS

Local Full Members

Mr B. Shugol Atalia, P.O. Box 30620, NAIROBI
Mr and Mrs A.L. Beales, P.O. Box 30356, NAIROBI
Mrs A.E. Birnie, P.O. Box 30158, NAIROBI
Mrs Rosemarie Breedyk, P.O. Box 40584, NAIROBI
Mr Kenneth L.I. Campbell, P.O. Box 14469, NAIROBI
Mr Claus Coln, P.O. Box 45767, NAIROBI
Mrs Barbara J. FitzGerald, P.O. Box 30580, NAIROBI
Ms. Arlene O. Frisbie, P.O. Box 30137, NAIROBI
Dr John R. Hanna, Faculty of Commerce, P.O. Box 30197, NAIROBI
Mr Robert E. Hegner, P.O. Box 33, NAKURU
Ms. Jane M. Lawry, P.O. Box 42202, NAIROBI
Dr Adrian D. Lewis, Dept. of Geology, P.O. Box 30197, NAIROBI
Miss Alice Lobb, P.O. Box 15005, NAIROBI
Mr Robin P. Myall, P.O. Box 54904, NAIROBI
Ms Brends Anne Davies, P.O. Box 30161, NAIROBI
Margaret Cnslow, c/o Mrs Sheppard, P.O. Box 24630, KAREN
Mr Hans Kann Basnussen, P.O. Box 1282, KITALE
Mr H.E. Richardson, P.O. Box 30003, NAIROBI
Mr Eric Risley, P.O. Box 24751, NAIROBI
Mrs Karin Steffensen, P.O. Box 40412, NAIROBI
Ms Irene Thoma, P.O. Box 20008, NAIROBI
Ms Priscilla White, P.O. Box 30125, NAIROBI
Ms Patricia Whitten, c/o P.O. Box 40658, NAIROBI

Local Junior Member

Mr Chip Sten, P.O. Box 25270, NAIROBI

SOCIETY FUNCTIONS

Monday 14th November 1977 at 5.30 p.m. in the Museum Hall, Nairobi: 'The Rendille', a film about the Rendille pastoral camel nomads in northern Kenya, produced by Granada Television, director C. Curling. Mr A Grum who was anthropological consultant will introduce the film and answer questions afterwards.

Sunday 20th November 1977: All day field meeting to Eaagads Ltd - a coffee estate in the Thika area by kind invitation of Mr and Mrs A.D. Clifford. Please meet at 9.30 a.m. sharp at the turn-off to Maryhill Sec. School on the main Nairobi/Thika road, just before the road bridge to Thika and Garissa. Please bring a picnic lunch and be prepared for walking.

Monday 5th December 1977 at 5.30 p.m. in the Museum Hall, Nairobi: Mr J.M. Nightingale of Sasamua Estate will give a lecture on 'Bees'.

December 10th - 12th 1977: Camping week-end to Lake Jipe, Tsavo West National Park. Leader Mr Don Turner. This excursion will be limited to members only and to 20 vehicles only. Camping will be near Lake Jipe - not at the bandas. Full camping equipment, food and water should be brought by members. Those wishing to take part in this excursion should please fill in the enclosed slip and return it to Mrs A.L. Campbell. P.O. Box 14469, Nairobi before 25th November. Further details will be sent to applicants after that date.

Monday 9th January 1978 at 5.30 p.m. in the Museum Hall, Nairobi: Mr Simon Stagg, B. Sc. will show a film of 'Breeding Colonies of Great White Pelicans at Lakes Nakuru and Elmenteita'. Mr Stagg will introduce the film and give an account of his work.

January 27th - 29th 1978: Week-end visit to Eburru, camping on the farm of Mr and Mrs R. Morgan. Details later.

Wednesday morning bird walks continue as usual. Please meet in front of the National Museum, Nairobi at 8.45 a.m. These popular walks are normally led by Mrs Fleur Ng'weno.

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: J. S. Karmali

Vice Chairman: Dr J. Kokwaro

Editor, Jl E. Africa nat. Hist. Soc. Nat. Mus.: Mrs J. Hayes

Secretary/Treasurer: Miss D. Angwin

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Ass. Secretary/Treasurer: Mrs D. M. Collins

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Co-opted Members: Mrs H. A. Britton (*Nest Record Scheme Organizer*), Dr A. W. Diamond, Dr A. Hill, J. Kahuranaga, J. Maikweki, S. Muchiru, Mrs F. Ng'weno, D. A. Turner.

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Ornithological Sub Committee: G. C. Backhurst, P. L. Britton, Mrs H. A. Britton, G. R. Cunningham-van Someren, Dr A. W. Diamond, A. D. Forbes-Watson, B. S. Meadows, Dr D. J. Pearson, J. F. Reynolds, D. K. Richards, D. A. Turner.

Joint Library Sub Committee (Society representatives): Mrs J. Hayes, Dr J. O. Kokwaro.

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is also possible); reciprocal arrangements with the Uganda Society's Library in the Uganda Museum, Kampala; family participation: wives and children of members may attend most Society functions; one copy of the *EANHS Bulletin* every two months; a copy of each *Journal* published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes *The Journal of the East Africa Natural History Society and National Museum*. Each issue consists usually of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (*EANHS Bulletin*), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub Committee publishes this quarterly bird magazine. Cost: EANHS members KShs. 50/- p.a., non-EANHS members KShs. 75/- p.a. All correspondence to D. A. Turner, Box 48019, Nairobi, Kenya.

MEMBERSHIP SUBSCRIPTION RATES

Life	One payment: Kshs. 750/-
Institutional (schools, libraries)	annual payment: Kshs. 50/-
Full	annual payment: Kshs. 50/-
Junior (full-time student, no Journal supplied)	annual payment: Kshs. 10/-

Subscriptions are due 1st January. From 1st July you may join for Kshs. 35/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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